

WHAT IS CLAIMED IS:

1. A strap tension indicator for an orthopedic brace, comprising:
a rigid brace frame member including an aperture;
a resilient member located within the aperture;
a strap tab; and
a fastening member partially within the aperture to secure the strap tab to the rigid brace member; wherein
in a first position, the fastening member abuts the resilient member, and the strap tab and the fastening member are movable together toward a second position in which the resilient member tends to push the strap tab and the fastening member back toward the first position.
2. The strap tension indicator of Claim 1, further comprising a strap, wherein the strap tab is connected to a first end of the strap.
3. The strap tension indicator of Claim 2, wherein when the strap is under minimal tension, the fastening member occupies the first position, and as tension in the strap increases the strap tab and the fastening member move toward the second position.
4. The strap tension indicator of Claim 1, wherein when the fastening member occupies the first position, the fastening member abuts a first side of the aperture.
5. The strap tension indicator of Claim 4, wherein the aperture first side includes an indentation, and the fastening member seats within the indentation when the fastening member occupies the first position.
6. The strap tension indicator of Claim 1, wherein the resilient member comprises a leaf spring.
7. The strap tension indicator of Claim 6, wherein the leaf spring is V-shaped.
8. The strap tension indicator of Claim 6, wherein the leaf spring includes multiple layers.
9. The strap tension indicator of Claim 6, wherein the aperture is generally triangular.
10. The strap tension indicator of Claim 9, wherein first and second end portions of the leaf spring abut peaks on second and third sides of the aperture.

11. The strap tension indicator of Claim 10, wherein the second and third aperture sides between the peaks define a first boundary of a space, and the leaf spring defines a second boundary of the space, and when the fastening member moves toward the second position the area of the space decreases.

12. The strap tension indicator of Claim 1, further comprising a strap tab cap, the fastening member passing through the cap to secure the cap to the rigid brace member.

13. The strap tension indicator of Claim 12, wherein when the fastening member occupies the first position, the cap covers a first indicator portion on the rigid member.

14. The strap tension indicator of Claim 13, wherein as the fastening member moves toward the second position, the cap exposes the first indicator portion.

15. The strap tension indicator of Claim 12, wherein when the fastening member occupies the first position, the cap exposes a first indicator portion on the rigid member.

16. The strap tension indicator of Claim 15, wherein as the fastening member moves toward the second position, the cap covers the first indicator portion.

17. The strap tension indicator of Claim 12, wherein when the fastening member occupies the first position, the cap covers a first indicator portion on the rigid member and leaves a second indicator portion on the rigid member exposed.

18. The strap tension indicator of Claim 17, wherein as the fastening member moves toward the second position, the cap exposes the first indicator portion and covers the second indicator portion.

19. The strap tension indicator of Claim 12, wherein the indicator comprises a label marker secured to the rigid member.

20. The strap tension indicator of Claim 1, further comprising a first indicator portion, a second indicator portion and a third indicator portion, wherein when the fastening member occupies the first position, the cap covers the first indicator portion and the third indicator portion, and leaves the second indicator portion exposed.

21. The strap tension indicator of Claim 20, wherein as the fastening member moves toward the second position, the cap covers the second indicator portion, continues to cover the first indicator portion, and exposes the third indicator portion.

22. The strap tension indicator of Claim 21, wherein as the fastening member moves past the second position, the cap covers the third indicator portion, continues to cover the second indicator portion, and exposes the first indicator portion.

23. The strap tension indicator of Claim 12, wherein when the fastening member occupies the first position, the cap exposes a first portion of an indicator on the rigid member.

24. The strap tension indicator of Claim 23, wherein when the fastening member occupies the second position, the cap exposes a second portion of the indicator.

25. A method of indicating the tension in a strap for an orthopedic brace, the method comprising the steps of:

- providing an orthopedic brace having at least a first strap and a rigid brace member, the first strap including a strap tab that is secured to the rigid brace member and capable of moving with respect to the rigid brace member between a first position and a second position;

- providing on the rigid brace member an indicator; and

- applying tension to the strap, which tension causes the strap tab to move from the first position towards the second position, thereby altering an appearance of the indicator.

26. The method of Claim 25, wherein as the strap tab moves, a strap tab cap slides across the indicator, covering or exposing various portions of the indicator.

27. The method of Claim 25, wherein the indicator includes at least a first portion providing a visual indication that tension in the strap is too low.

28. The method of Claim 27, wherein the indicator includes at least a second portion providing a visual indication that tension in the strap is too high.

29. The method of Claim 28, wherein the indicator includes at least a third portion providing a visual indication that tension in the strap is optimal.

30. A strap tension indicator for orthopedic brace, comprising:

- a rigid brace frame member;

- a strap tab slidably secured to the frame member, the strap tab being movable relative to the frame member between a first position and a second position; and

- a resilient member; wherein

the resilient member biases the strap tab towards the first position.

31. The strap tension indicator of Claim 30, further comprising a strap tab cap secured to the frame member.

32. The strap tension indicator of Claim 31, wherein the strap tab and the strap tab cap cooperate to provide a first visual indication when the strap tab occupies the first position and to provide a second visual indication when the strap tab occupies the second position.

33. The strap tension indicator of Claim 32, wherein the strap tab is slidable relative to the strap tab cap between the first position and the second position.

34. The strap tension indicator of Claim 33, wherein the strap tab includes a tab that is visible when the strap tab occupies the first position, and that is hidden beneath the strap tab cap when the strap tab occupies the second position.

35. The strap tension indicator of Claim 31, wherein the strap tab and the strap tab cap move together as the strap tab moves between the first position and the second position.

36. The strap tension indicator of Claim 35, wherein when the strap tab occupies the first position the strap tab cap covers a first visual indicator and exposes a second visual indicator, and when the strap tab occupies the second position the strap tab cap covers the second visual indicator and exposes the first visual indicator.

37. The strap tension indicator of Claim 31, wherein the strap tab may occupy a third position that is intermediate the first position and the second position.

38. The strap tension indicator of Claim 37, wherein the strap tab and the strap tab cap cooperate to provide a first visual indication when the strap tab occupies the first position and to provide a second visual indication when the strap tab occupies the second position and to provide a third visual indication when the strap tab occupies the third position.

39. The strap tension indicator of Claim 37, wherein the strap tab and the strap tab cap move together as the strap tab moves between the first position, the second position and the third position.

40. The strap tension indicator of Claim 39, wherein when the strap tab occupies the first position the strap tab cap covers a first visual indicator, exposes a second visual indicator and covers a third visual indicator, and when the strap tab occupies the second position the strap tab cap exposes the first visual indicator, covers the second visual indicator

and covers the third visual indicator, and when the strap tab occupies the third position the strap tab cap covers the first visual indicator, covers the second visual indicator and exposes the third visual indicator.

41. The strap tension indicator of Claim 30, further comprising an orthopedic brace, wherein the strap tension indicator connects a strap of the brace to the rigid brace frame member.

42. The strap tension indicator of Claim 41, wherein the brace is a knee brace.

43. A strap tension indicator for orthopedic brace, comprising:

a rigid brace frame member;

a strap tab slidably secured to the frame member, the strap tab being movable relative to the frame member between a first position and a second position;

means for indicating when the strap tab occupies the first position and when the strap tab occupies the second position; and

a resilient member; wherein

the resilient member biases the strap tab towards the first position.

44. The strap tension indicator of Claim 43, wherein the means for indicating comprises a portion of the strap tab that cooperates with a strap tab cap, the strap tab cap alternately exposing and covering the portion of the strap tab as the strap tab moves between the first and second positions.

45. The strap tension indicator of Claim 43, wherein the means for indicating comprises at least one portion on the rigid frame member that cooperates with a strap tab cap, the strap tab cap alternately exposing and covering the portion of the frame member as the strap tab moves between the first and second positions.

46. A strap tension indicator for orthopedic brace, comprising:

a rigid brace frame member including an aperture;

a resilient member located within the aperture;

a strap; and

a fastening member partially within the aperture to secure the strap to the rigid brace member; wherein

in a first position, the fastening member abuts the resilient member, and the strap and the fastening member are movable together toward a second position in which the resilient member tends to push the strap and the fastening member back toward the first position.

47. A strap tension indicator for orthopedic brace, comprising:

a rigid brace frame member;

a strap secured to the frame member, the strap being movable relative to the frame member between a first position and a second position; and

a resilient member; wherein

the resilient member biases the strap towards the first position.